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ABSTRACT

California's school-to-career (STC) efforts were examined in a statewide evaluation study that was initiated in December 2000 and scheduled for completion by June 2002. The study's first phase was assessed in an interim report that focused on the following major activities: (1) development of a white paper describing the STC's national and state status; (2) development of a statewide evaluation plan; (3) implementation of a statewide survey of employers and labor organizations involved in local STC activities; (4) establishment of working relationships with existing STC statewide committees and formation of a practitioners' panel to advise the statewide evaluation effort; and (5) provision of assistance to the state in developing the local partnership (LP) case studies request for proposals and evaluation of the case studies proposals submitted by LPs. The highlights and lessons learned from each activity were summarized, and the insights gained during the interim evaluation were used to shape thinking about the final evaluation report's structure and format and the following issues related to the methodology to be used in phase 2 of the study: (1) maximizing and documenting response rates; (2) applying common definitions to variables of interest; (3) implications of sampling for analysis across LPs, and (4) identifying the appropriate unit of analysis and reporting. (MN)

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Interim Report

California School-to-Career Evaluation Study

Submitted By:

WestEd
730 Harrison Street
San Francisco, CA 94107

and

MPR Associates, Inc.
2150 Shattuck Avenue
Berkeley, CA 94704

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California School-to-Career Evaluation Study

Interim Report

I. Introduction

School-to-Career (STC) represents a major education reform effort in California, designed to reinforce students' academic learning through real-world and work-related contexts and to help students draw the connections between what they currently do in school with their future education and career aspirations. In order to gauge the progress and impact of STC as a statewide education reform strategy, California's governor, in collaboration with the STC Interagency Partnership (IAP) consisting of the Superintendent of Public Instruction, the Chancellor of the California Community Colleges, and EDD, contracted with WestEd and MPR Associates to conduct a statewide evaluation of STC in California. This statewide evaluation study is required by the School-to-Work Opportunities Act of 1994 (STWOA), under which federal funds are provided to California to support development of its STC system.

Underway since December 2000, the statewide evaluation study is scheduled for completion by June 2002. Four major research questions, listed in Table 1 below, guide the evaluation.

Table 1. Research Questions to Guide the Evaluation

(1) What is the status of STC implementation in California?

- How many schools, teachers, and students are participating in STC activities?
- Are there regional differences or other discernible patterns in the type or degree of STC participation?

(2) How has STC affected student preparation for post-secondary education and career entry?

- What types of students are being influenced by STC for post-secondary and employment opportunities? What types of students are not being influenced?
- What is the evidence that students who participate in STC are better prepared for post-secondary education and/or career entry?

(3) To what degree and in what ways has STC contributed to systemic change?

- What changes in school programs or infrastructure (e.g., new models of career development, new career-focused curricula, new partnerships with employers to provide work-based experiences for students) are associated with or can be reasonably attributed to STC efforts?
- How are local and state STC initiatives coordinating with other education reform and assessment initiatives?

(4) Have STC principles penetrated the community deeply enough to be sustainable?

- How will services and activities supported by STC funds be supported by other sources after STWOA funding ends?
- Do stakeholders see value in sustaining a STC system?
- How will existing STC systems function after the end of state and federal support?

Phase 1 evaluation activities have been completed, and Phase 2 evaluation activities are just now underway. At this mid-point juncture in the study, it is valuable to review the work completed to date, and its implications for the final evaluation report.

Purpose of Report

This Interim Evaluation Report summarizes preliminary evaluation findings and discusses ongoing methodological and data collection strategies, including any adjustments to the original evaluation study design. The primary focus is on progress to date, rather than on summative outcomes of the evaluation. It is premature to focus heavily on outcomes of the evaluation, given that key aspects of the study are still underway. Nevertheless, by documenting the work in progress, the Interim Evaluation Report serves to foreshadow the final evaluation report that will be submitted in Summer 2002.

Structure of the Report

The Interim Evaluation Report is organized as follows. Section II describes the highlights of Phase 1 activities. Section III provides an overview of Phase 2 activities. This is followed, in Section IV, by a discussion of methodological issues and challenges

for Phase 2. Finally, Section V describes how the Final Evaluation Report will be organized.

II. Review of Phase 1 Evaluation Activities and Lessons Learned

Overview of Phase 1 Evaluation Activities

Phase 1 consisted of a series of activities and accomplishments that set the course for this important statewide evaluation study. Specifically, Phase 1 activities served three key functions. First, they established a solid anchor for Phase 2 evaluation activities by defining California's baseline STC status and creating the working relationships and networks necessary to conduct a comprehensive statewide evaluation study. At the same time they provided important stand-alone products, specifically the White Paper and an Employer/Labor Organization Survey, which were of immediate use to the state and Local Partnerships (LPs). Finally, Phase 1 activities piqued interest and began the momentum in the field for the statewide evaluation and its potential benefits.

The accomplishments for Phase 1 can be summarized under five major categories of activities:

- develop a White Paper to describe the national and state status of STC;
- develop a statewide evaluation plan;
- conduct a statewide survey of employers and labor organizations who are participating in local STC activities;
- establish working relationships with existing STC statewide committees and convene a Practitioners Panel to advise the statewide evaluation effort; and
- assist the state in developing the LP Case Studies Request for Proposals and evaluate Case Studies proposals submitted by LPs.

The highlights and implications associated with each of these activities are described below.

Highlights and Lessons Learned from the White Paper

The first major deliverable in Phase 1 was the White Paper. Authored by WestEd and MPR project staff, the paper examined and summarized the current status of STC in California. In preparing this comprehensive paper, project staff researched and synthesized information from a variety of sources, including: LP applications for STWOA funds; LPs' Quarterly Reports; data from two federally-sponsored longitudinal evaluations of STWOA implementation (the National Evaluation of STW Implementation and the STW Progress Measures); and existing evaluations conducted for LPs. The draft White Paper was submitted to the IAP on April 17, 2000. After receipt of comments, the final White Paper was formally submitted on July 7, 2000 and then formatted for Web site posting on August 21, 2000.

Major Findings from the White Paper

In conducting the research on the White Paper, project staff discovered substantial amounts of existing data about STC in California. However, these data are based on few common measures or reporting formats, are primarily qualitative, and focus on processes/plans implemented by LPs rather than on student outcomes. Given that LPs are, for the most part, still engaged in the process of building systems and programs, the limitations of existing data are understandable. However, current data about STC in California do not provide information that is of the highest interest to funders and the Legislature (e.g., student performance data), nor do they allow us to directly answer key research questions (e.g., *What impact does STC have on students' transition to post-secondary education?*).

Despite these limitations, existing data on California's STC efforts to date, as outlined in the White Paper, show the following:

- The diverse goals of STC efforts in California suggest that both attitudinal and performance measures are needed to assess the full influence of STC on students, teachers, employers, and systems.
- On a statewide basis, California maintains school-level, not student-level data about student academic performance; without student-level data it is impossible to evaluate the influence of STC on student performance.

- As evidenced in individual LP STC implementation plans, there is a lack of common concepts and vocabulary, exacerbating evaluation difficulties associated with a lack of common measures across LPs.
- Historically, California's response rate to STW-related surveys, and therefore the availability of key comparable quantitative data, has been notably low. Specifically, California's response rate on the 1997-98 Progress Measures Survey was 57%. Similarly, the response rate for 1998-99 was 56%.[1]
- Available data on STC implementation in California lack specificity with respect to either quality or intensity of STC activities.

In summary, the White Paper concluded that currently available data do not allow for strong inferences about the status of STC in California relative to sustainability and student preparation, or how well LPs are meeting their goals. However, while existing data have important limitations, particularly with respect to STC impact and student outcomes, meaningful information on STC process and implementation were gleaned from them. These findings informed the evaluation design for Phase 2 activities and are described below.

Implications of White Paper Analyses for Phase 2 Activities

Overall, White Paper analyses of STC implementation, data quality, and data availability indicated that Phase 2 evaluation activities must strike a balance between (1) canvassing LP activities across the state to achieve a broad understanding of California's STC progress and impact, and (2) delving deeper into a more limited number of LPs to better understand systemic change and sustainability of STC. Additional implications included the following:

1. Diverse STC implementation strategies suggest the need for some flexibility in data collection as well as common protocols/measures for Phase 2 evaluation activities.
2. Diverse implementation strategies aiming for impact at multiple levels (student, teacher, employer, local system, state system) necessitate evaluation at a variety of levels.

[1] The most recent Progress Measures Survey (1999-2000) had a higher response rate (86%) than in previous years; however, this is most likely attributable to a much shorter survey than in previous years as well as extensive telephone follow-up which was not conducted in other years.

3. Because many STC activities aim to change students' attitudes as well as skills and knowledge, attitudinal measures are appropriate in conjunction with performance and other outcome measures.
4. Seeking correlations between STC activities and changes in student performance or attitudes in places where STC activities have been minimal (e.g., one Career Day or one job shadow over the course of a year) will yield minimally useful information. Therefore, evaluation activities need to focus on LPs where STC activities have been substantial.
5. While there has been limited implementation of complex school-based and work-based activities, we must focus on these activities, as they have the greatest chance to influence student outcomes.
6. Given that existing data offer little to no comparability, standardized, well-defined indicators must be developed. Similarly, standardized, well-defined data collection instruments and methods are necessary.
7. Given that many LPs, particularly new ones, are attempting to build systems rather than isolated programs, evaluation of system change is critical.

Highlights and Lessons Learned from the Employer/Labor Organization Survey 1

The Employer/Labor Organization Survey was a statewide survey concerning the roles employers and labor organizations are currently playing in California's STC effort, factors affecting participation, and recommendations to increase involvement. It was conducted between March 12 and June 15, 2000 by WestEd/MPR project staff.

LPs provided contact information for employer and labor organizations that were participating in local STC activities and those who were invited to participate, but did not. They submitted contact information for approximately 12,500 employers and 150 labor organizations. From this population, a stratified sample was created, and the survey was mailed to more than 2,300 employers and 102 labor organizations statewide. Project staff conducted telephone follow-ups to increase the response rate. Approximately 19% of the employers returned useable survey forms, as did almost 24% of the labor organizations. At the request of LPs, information identifying the employers and labor organizations that participated in the survey is being kept confidential. (See Appendix A: Employer/Labor Organization Survey 1.)

Recommendations Based on Survey Results

WestEd/MPR staff made the following recommendations based on the findings of the statewide STC evaluation survey.[2]

- Employers overwhelmingly identified two factors that contributed to their company's decision to participate in STC: (1) promoting student awareness of specific careers/industries and (2) providing realistic expectations of work. Therefore, LP marketing efforts to increase employer participation should consider emphasizing how employer involvement in STC can promote student awareness of specific careers and provide students with realistic expectations of work.
- Responding employers believe that internships, job shadowing, speaking in classes, and mentorships are the best ways to influence students. Therefore, emphasizing these activities should be considered in employer engagement efforts.
- Non-profit organizational employers are the least involved in STC activities. Over 25% of non-profit respondents stated that they were not familiar with the activities of their LPs. The most common barriers to participation by non-profits were: unfamiliarity with STC activities; lack of available resources; time and energy required for participation; and possible liabilities. More than one-third of the non-profits stated that wage subsidies and financial incentives would significantly increase their participation, and almost 40% found the time and energy required to communicate with schools and STC partnerships a barrier to participation. To increase participation from the non-profit sector, LPs might target engagement efforts specifically at non-profits and address the barriers of communication. However, at this time, it may not be possible to overcome the financial barriers inhibiting non-profit participation.
- Survey data suggest that larger employers participate in larger numbers of STC activities. In addition, public sector employers were somewhat more likely than private, for-profit or non-profit organizations to participate in larger numbers of activities. Given limited program resources, the most efficient strategy to increasing employer involvement may be to pursue larger employers and public sector employers, both of which have a relatively high likelihood of STC participation.
- Smaller companies appear to be relatively under-represented in STC activities. Thus, our recommendation was that outreach activities include assessing how to reach smaller employers.

[2] Note that because the LPs provided lists of employers and labor organizations for the survey, the survey sample should not be construed as representative of all of California. Nevertheless, the survey's results allow for identification of some general trends and recommendations about increasing STC participation in the future.

- Employers responded that they most frequently had STC relationships with their local high schools versus middle and elementary schools (66% versus 37% and 38%, respectively).[3] However, high schools comprise only 12% of the public schools in the state while more than 73% are elementary schools, and 15% middle schools.[4] If the STC initiative is to be a comprehensive effort, the relationship between employers and middle and elementary schools must be strengthened.

Labor Participation in STC

Labor organizations are not yet major players in local STC efforts. Relatively few LPs have deeply engaged partners from labor organizations and when involved, labor organizations appear concentrated in few industries. Based on these findings, major efforts are needed to engage them in STC activities.

Working with STC-related Groups

A major assumption underlying the statewide evaluation design is that critical stakeholders need multiple opportunities and avenues (e.g., face-to-face meetings, email, and conference calls) to provide input and feedback on evaluation activities and deliverables. This is especially true since stakeholders have responsibilities for providing the actual data for the statewide STC evaluation. During Phase 1, project staff used several avenues for communication and information with STC-related groups regarding the statewide evaluation.

Informing the IAP and California STC Committees of the Evaluation Work

As might be expected at the initial stage of any large, statewide effort, the evaluation project director, Daniel McLaughlin, maintained daily contact with the IAP contact, Chris Rury, during the first 13 months of the project. In this way, the IAP was kept informed about project developments as they occurred, including any needs for adjustments in the evaluation workplan or schedule. At a more formal level, project staff provided quarterly

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[3] Sums to more than 100 percent due to multiple responses.

[4] Education Data Partnership (EdData) (On-line). Available http://www.ed-data.k12.ca.us/dev/State.asp

progress reports to the IAP. Moreover, project staff submitted outlines, drafts, and final products for IAP review.

WestEd/MPR staff also made project presentations at the request of the IAP. Several of these presentations took place at project onset to inform key groups about the design of the study and to elicit their feedback. Specifically, project staff made a presentation to the Evaluation and Accountability Committee on January 11, 2000 in Sacramento. In February 2000, WestEd/MPR senior staff attended a California STC Advisory Council meeting in San Diego to provide an overview of the statewide study. In March 2000, WestEd/MPR made a presentation to EDD senior staff in Sacramento to introduce the evaluation study. In April 2000, Daniel McLaughlin participated in the California delegation to the Marketing/Evaluation conference in San Antonio. The purpose of this event was to coordinate and share effective strategies for marketing and evaluation efforts.

Other presentations were connected with specific project deliverables. For example, WestEd/MPR staff members made a presentation on the findings of the Employer/Labor Organization Survey 1 to the Employer/Labor Involvement Committee on July 12, 2000. WestEd/MPR also provided an update about the evaluation to the System Accountability Committee on July 19, 2000 and delivered a presentation about the evaluation at the 2000 STC Summer Academy.

Establishing and Convening the Practitioners Panel

Besides the IAP, the LPs are another constituency from which project staff sought regular input. Our first step was to invite all LP directors to participate in a March 14, 2000 telephone conference. During this telephone conference, project staff "walked" participants through a Web-based slide show that introduced the design and components of the statewide STC evaluation plan. We also answered questions raised by LP directors and representatives about the statewide STC evaluation study.

The next step was to establish a Practitioners Panel in Spring 2000 to provide a forum for ongoing LP feedback on evaluation design, data gathering, and instruments. While the majority of panel members are LP directors and evaluators, other members include an employer representative, an IAP staff member, and a member of the Evaluation and Accountability Committee.

The Practitioners Panel consists of two groups: (1) a Steering Committee of five members who have committed to work closely with IAP and WestEd/MPR staff, and (2) a Technical Review Committee of approximately ten members who have committed to review evaluation work. The first meeting of the Practitioners Panel was held on April 14, 2000 at WestEd's San Francisco offices. Prior to this meeting, Practitioners Panel members were provided with several documents to review, including: draft criteria for selection of LPs for the Case Studies; a draft outline for the STC Evaluation White Paper; and a draft of the Employer/Labor Organization Survey 1. The actual meeting focused on the overall statewide evaluation design and elicited participants' feedback on the draft documents.

Subsequent meetings of the Practitioners Panel were held by telephone conference. In November 2000 and January 2001, telephone conferences were held in order to obtain Panel member feedback on draft instruments (e.g., surveys and interview protocols) that project staff were developing for the Case Studies. Most recently, the outline for this Interim Evaluation Report was sent to the Practitioners Panel for review and comment on March 30, 2001.

Supporting the LP Case Studies Request for Proposals (RFP) and Review Process

As part of the statewide evaluation of STC, California set aside substantial funding (up to $2.5 million) for case study evaluation efforts to be conducted by selected LPs. Designed by WestEd/MPR project staff, the LP Case Studies are intended as in-depth investigations of selected local STC efforts to evaluate: local implementation progress to date; the influence of STC involvement on student outcomes; the contribution of STC to systemic change; and the potential for sustaining local STC systems. Case Study efforts

conducted by LPs will also be highly useful to those LPs for their own evaluation and sustainability efforts.[5] The 61 current and former State/Federal STC implementation and Urban Rural Opportunity (UROG) grantees were invited to submit a proposal, with the anticipation that 15 to 18 would be selected through the competitive bidding process.

Developing the LP Case Studies RFP

WestEd/MPR staff worked closely with IAP staff to develop the LP Case Studies RFP, whereby interested LPs were invited to submit a competitive bid for Case Study funding. Specifically, project staff drafted substantial parts of the RFP, with the first draft submitted to the IAP for review in August 2000. Between August and October, WestEd/MPR worked closely with IAP staff to revise and refine the RFP, and maintained regular communication with LPs to apprise them of progress on the RFP and the schedule for RFP release. The RFP was posted on the state Web site on October 26, 2000.

Following the release of the RFP, WestEd/MPR and IAP staff conducted a technical assistance workshop on November 9, 2000 in Sacramento to present the RFP and answer questions from LPs interested in developing a proposal. Subsequent to this meeting, WestEd/MPR and IAP staff twice posted written questions and answers about the RFP on the state Web site. (See Appendix B: Questions and Answers from Technical Assistance Workshop.)

Selecting Case Study School Samples

One of the primary goals of the California STC evaluation is to identify the influence on students' academic achievement of participating in STC-type school reforms. To accomplish this, LPs conducting in-depth Case Studies were required to identify schools that have had substantial STC implementation and those that have not. Defining these "high STC implementation" schools is necessarily a somewhat subjective process, because LPs, school districts, and individual schools have been encouraged to implement STC systems and activities in ways that meet their own local needs. However, LPs were

[5] While evaluators were hired by LPs to conduct evaluation activities at respective sites, for the purpose of this report, LP refers to the party conducting the evaluation.

asked to use existing data and knowledge to make judgements about high schools meeting or not meeting the criteria detailed in the RFP. (See Appendix C: Appendix H of Case Study RFP.)

On November 30, 2000, all LPs interested in submitting a Case Study proposal were required to provide a comprehensive list of high schools in their LP to WestEd/MPR, identifying each school as either "high STC implementation" or "other." A total of 20 LPs submitted lists, ranging in size from 1 to 58 high schools. In December 2000, WestEd/MPR staff worked intensely to process the lists submitted by LPs and to generate stratified random samples of schools for each LP. This labor-intensive process entailed drawing multiple samples for several LPs, as replacements were sought for selected schools that elected not to participate in the study. Each sample resulted in overrepresentation of high schools with high STC implementation. Such oversampling ensures sufficient representation of high schools with robust STC activities, and at the same time, allows for generalizing of findings across a given LP. (See Appendix D: List of Selected Sample High Schools.)

Designing and Participating in the Proposal Evaluation Process

As LPs worked on Case Study proposals, project staff assisted IAP staff in designing the process for training of proposal reviewers and in the actual scoring of proposals. To best address the range of STC models of governance and implementation strategies in California, WestEd/MPR proposed key sample characteristics and selection criteria for the Case Study sample. WestEd/MPR proposed that the overall sample be diverse, with representation from different geographic regions, types of locales (urban, suburban, rural), sizes of LPs, and populations targeted for participation. (See Appendix E: Details of Key Sample Characteristics.) Given the key role of the Case Studies to the overall statewide evaluation plan, project staff worked closely with the IAP and obtained input from the Practitioners Panel to establish the criteria for selecting LPs for the Case Studies.

Proposals were due on January 3, 2001. Soon after, project staff examined all submissions in order to select examples for the purpose of training proposal reviewers. Three WestEd/MPR staff attended and assisted in conducting the proposal review session that took place on January 9 through 11, 2001 in Sacramento. Fifteen LPs submitted completed proposals and the competitive process resulted in 13 LPs selected to conduct Case Studies as part of the overall statewide STC evaluation effort. (See Appendix F: List of LPs Applying for Case Study Funding, List of LPs Awarded Case Study Funding, and Description of Populations Served by Awarded LPs.)

Summary of Phase 1 Findings

In summary, there are a number of salient findings or outcomes from Phase 1 that have clear implications for next steps in the study. First, the inconsistent quality of existing data on STC was underscored during our research on the White Paper. Clearly, there is a need for uniform quality indicators in order to properly ascertain the status and progress of STC in California. Second is the apparent interest in the field for reliable STC data to help inform state and local planning and implementation efforts. Many LPs expressed this interest to us as we posted the White Paper and designed the Case Studies. Third, WestEd/MPR staff were able to apply our state and national experience to play an advisory role to IAP staff in STC matters that have implications beyond specific evaluation activities. The level of our involvement with IAP staff during Phase 1 was both professionally satisfying and necessary to the progress of the study. Finally, the information gleaned from Phase 1 activities clearly position California to maximize the potential of and better understand the possible obstacles to Phase 2 evaluation implementation activities.

III. Overview of Progress on Phase 2 Evaluation Activities

How Phase 2 Activities Build from Phase 1 Activities

Evaluation activities planned for Phase 2 build directly on what was undertaken during Phase 1. First, using the findings of the White Paper to define the baseline status of STC activities highlighted the complexity of the California STC landscape, and the unevenness in the availability, format, and quality of existing data about STC in California. Therefore, the evaluation design in Phase 2 takes into account the need to purposefully triangulate different evaluation design and data sources. This will help to mitigate shortcomings in the data from any one source through the collection of similar evidence by multiple methods and from other data sources. As Table 2 shows, the evaluation research questions of interest are addressed through a variety of data collection strategies and instruments.

Table 2: Primary Data Collection Strategies/Instruments to Address STC Evaluation Research Questions

Research Question	Primary Data Collection Strategy/Instrument*
1. What is the status of STC implementation in California?	☐ CORE Case Studies Interview Protocols (administrators, teachers, counselors, employers, labor representatives) ☐ Employer/Labor Survey ☐ LP Director Telephone Interviews ☐ STC Evaluation White Paper
2. How has STC affected student preparation for post-secondary education and career entry?	☐ CORE Senior Survey ☐ CORE Senior Follow-up Survey ☐ PLUS Case Studies
3. To what degree and in what ways has STC contributed to systemic change?	☐ CORE Case Studies Interview Protocols ☐ LP Director Telephone Interview Protocol
4. Have STC principles penetrated the community deeply enough to be sustainable?	☐ Employer/Labor Survey ☐ LP Director Telephone Interview Protocol ☐ CORE Interview Protocols

* The selected strategies and instruments identified in Table 2 for each research question were designed to be the primary means for answering a particular question.

Second, findings from the first administration of the Employer/Labor Organization Survey in Phase 1 will inform the design and administration of a second Employer/Labor Organization Survey to be undertaken during Phase 2.

Third, in Phase 1, WestEd/MPR established working relationships with existing STC statewide committees, and organized a Steering Committee and Practitioners Panel to serve in an advisory capacity. During Phase 2, our work with these key stakeholders is continuing as they offer feedback about Case Study instruments, drafts of reports, etc. Finally, in Phase 1, WestEd/MPR assisted in the development of an RFP for Local Partnership Case Studies. In Phase 2, project staff are designing surveys, interview protocols, and reporting formats for these Case Studies, as well as monitoring the evaluation activities undertaken by LPs and offering technical assistance.

Components of the Phase 2 Evaluation

Telephone Interviews of all LP Directors

In the original evaluation design, a plan to develop and administer a survey to all LP directors was proposed. The survey would address key aspects of each of the four major research questions, as well as those not adequately addressed by existing surveys, such as the state rollout strategy and activities, coordination of state and local resources, and the incorporation of state and national skill standards into local STC.

While surveys are typically a cost-effective and efficient method for collecting data, the usefulness of the resulting data depends on achieving an adequate response rate. One of the notable findings reported in the White Paper is California's low response rate on STW-related surveys. This finding, coupled with our own experience with similar surveys, led us to reconsider administering the LP director survey and to consider alternative means of data collection from LPs throughout the state.

Instead of mail surveys, our revised plan is to conduct telephone interviews of all LP directors who are in non-funded LPs. The LP Director Phone Interview will be brief, and

will consist of a strategic mix of closed and open-ended questions that will provide a combination of qualitative and quantitative data about potential changes in LP funding, structure, and implementation after STWOA sunsets. These interviews will be conducted in the fall of 2002.

Although more time- and labor-intensive, telephone interviews typically result in better response rates. WestEd/MPR's goal is to focus efforts on achieving a 90% response rate for the phone interview by implementing several follow-up strategies, including additional phone calls and letters. Since project staff will concentrate resources on realizing this high response rate, only one telephone interview of LP directors will be conducted rather than two mail surveys, as proposed in the White Paper. Through this change in data collection strategy, we hope to obtain a more complete picture from LP directors of STC sustainability.

Synthesis of Data from Extant Sources

During Phase 2 of the evaluation, project staff will continue to examine existing sources of data for evidence related to this evaluation's questions of interest. Three sources of data for this aspect of the study include the National School-to-Work Progress Measures Survey, narrative quarterly reports completed by LPs for the state, and evaluation reports conducted by LPs not participating in Case Study research.[6]

Initially, project staff hoped to analyze the longitudinal data provided by these sources. However, it is important to note that the 1999-2000 Progress Measures Survey is significantly different than Progress Measures Surveys administered in previous years. Specifically, the 1999-2000 survey has fewer items and also asks questions that had previously been asked through Mathematica's Local Partnership Survey. These changes were made to reduce the amount of time needed by respondents to answer the survey, with the hope that, as a consequence, response rates would increase. The change in

[6] An anticipated fourth data source was the Local Partnership Survey, conducted by Mathematica Policy Research. However, contrary to expectations, that survey was not administered in fall 2000. Instead, the National School-to-Work Office requested that more extensive data be collected from state-level School-to-Work directors and a small sample of Local Partnerships.

survey format will have implications for longitudinal data analysis during Phase 2, since *many of the key questions asked in previous years are no longer on the 1999-2000* version of the survey. (See Appendix G: 1999-2000 Progress Measures Survey.)

Also, as was noted in the White Paper, LPs' quarterly reports to the state generally are not consistent with each other in style or format, and they do not include quantitative or comparable measures. Consequently, from these reports we cannot draw inferences about activity levels within or across LPs, nor can we draw conclusions about progress toward achieving goals. However, we will use extant data to supplement the findings from our ongoing data collection efforts (e.g., the Employer/Labor Organization Survey, the LP Director Interviews, and the Case Studies). Analyses of extant data will help us make meaningful comparisons and examine growth or other trends of STC activity within and across LPs.

Employer/Labor Organization Survey 2: Approach and Link to Previous Survey

As per the original RFP for the California STC Evaluation Study, the evaluation plan calls for administering two Employer/Labor Organization Surveys: the first in May 2000 in Phase 1, and the second in Spring 2001 during Phase 2. As was described earlier, the first survey was mailed as planned in May 2000, and results were presented in a report entitled "Results and Recommendations based on the Employer/Labor Organization Survey" in September 2000.

Upon completion of the September 2000 report describing results of the first survey, the STC Employer and Labor Involvement Committee expressed interest in revising plans for the survey's second administration. Specifically, concerns were raised that administering a second survey less than a year after the first survey administration would provide few new insights. Moreover, Committee members were concerned that the sample of employers responding to the first survey was limited and therefore might not be representative of the employers and labor organizations throughout the state. WestEd/MPR staff asked for feedback regarding the second administration of the survey at a meeting on July 12, 2000. However, the Employer and Labor Involvement

Committee has not yet offered recommendations to WestEd/MPR about how to proceed, and survey administration has been delayed. In order to help the Committee in the decision making process, WestEd/MPR staff described possible approaches for the Committee's consideration, and detailed the benefits and drawbacks of each approach. The desirability and feasibility of each option varies. These options are presented below.

1. Random Statewide Survey of All Employers and Labor Organizations

On the face of it, a logical approach would involve a random sample of all employers and labor organizations throughout the state. This would yield a comprehensive picture about how employers and labor organizations across the state view STC. However, this approach depends on the use of an existing and readily accessible data file for employers and labor organizations, respectively. As described in the White Paper, available project resources will not allow for the creation of these databases specifically for this project, nor are project resources sufficient to conduct substantial reformatting, manipulation, and error checking and resolution on an existing statewide database system. Moreover, surveying a sample of all employers in California may not yield as useful information as targeting those employers that have familiarity and can provide information about what works and does not work from an informed perspective. Therefore, WestEd/MPR feel this option is neither feasible nor advisable.

2. Follow-up to First Survey

One approach proposed in the White Paper is to use the second survey administration as a follow-up to the first survey administration. In this way, the focus would be on the sub-population of employers and labor organizations that have some exposure and familiarity with STC. Specifically, a two-pronged survey approach for employers was proposed: (1) re-survey the actual respondents to the first survey and (2) survey another random sample of employers from the existing project database of employers. For labor organizations, the following was proposed: (1) re-survey respondents to the first survey and (2) survey additional labor organizations identified by the LPs involved in the Case Studies.

Although this option is preferable to the first in terms of efficiency and targeting an informed sub-population, it also has its limitations. Specifically, as noted by the STC Employer and Labor Involvement Committee, the focus on examining progress over less than one year's time by surveying the same respondents twice may not yield the most useful results. In addition, identifying the very same individual respondents from the initial survey would be problematic because in many instances, LPs supplied names of businesses and organizations rather than the names of contact people. Thus, there is no guarantee that the same individuals who completed the first survey could be reached for the follow-up survey.

3. *Sustainability Survey to Employer/Labor Organizations as Identified by LP Case Study Sites*

This option calls for a new, succinct survey that focuses primarily on sustainability—a major research issue for Phase 2. As such, the survey would: (1) clarify or delve more deeply into issues uncovered from the first survey, and (2) prompt employers and labor organizations to provide their perspective on whether they believe STC is sustainable and what it would take to sustain it. This approach specifically targets the 13 LPs funded to conduct Case Studies and asks them to identify employers and labor organizations with which they have been in contact concerning STC. There are advantages associated with targeting the 13 Case Study LPs. First, these 13 LPs are already conducting evaluation research with WestEd/MPR, so that providing information on employers and labor organizations should pose little additional burden on them. In contrast, we found it difficult during the first Employer/Labor Organization Survey to obtain usable employer/labor contact information from some LPs. Specifically, many LPs that were not engaged or interested in evaluation research chose not to provide lists, or provided incomplete or informally written lists. As it stands, project staff already have usable lists of employers and labor organizations from 11 Case Study LPs that participated in the first survey. Thus, we would only need to ask these 11 LPs to update their contact lists and then work with the other two to supply initial lists. In summary, the advantages of this option are that it is focused on a specific key issue (sustainability) and targets a fairly accessible sub-population that is geographically spread across 13 different LPs.

4. Employer/Labor Organization Focus Groups on Sustainability

This option would forego a survey altogether and instead rely on focus groups to provide information from select employers and labor organizations. WestEd/MPR staff would conduct regional focus groups in Northern California, Southern California, and the Central Valley. The advantage of this approach is that it allows for dynamic group discussion and potentially richer information. The disadvantage is that we would reach fewer individuals and organizations than through a survey. Moreover, another STC-related project may be planning to conduct employer and labor organization focus groups in the near future, which may result in some overlap of effort.

5. Redirect Survey Funds to Provide More Technical Assistance to Case Study LPs

Although much work has been accomplished during Phase 1, the bulk of our statewide evaluation work lies ahead. The longitudinal Case Studies, which will be conducted during Phase 2, are a key component of the overall evaluation. As will be discussed in detail below, during the early stages of Phase 2, WestEd/MPR recognized that a number of LPs will require a much higher level of technical assistance than was anticipated in the original workplan. Given the importance of the Case Studies to the overall evaluation design it is imperative that LPs receive the additional support they need from WestEd/MPR. We strongly recommend that the IAP consider redirecting funds originally earmarked for the Employer/Labor Organization Survey 2 to providing additional technical assistance to Case Study LPs.

LP Case Studies

The unique contribution of the Case Studies to the overall evaluation design is that they provide an opportunity to collect complex, in-depth information. It is primarily through concerted study of selected LPs that the evaluation can glean detailed information and insight about the inner workings of STC and the nuances of systemic change. Most importantly, the Case Studies will allow the state to closely examine the ways in which STC sustainability is being achieved.

Description of Case Studies Approach

The Case Study design was significantly influenced by the knowledge gained during Phase 1 evaluation activities. The following considerations assisted in shaping the longitudinal study:

1. To best understand STC implementation across the state, the evaluation needs to focus on LPs where STC activities have been substantial. Little can be gained by focusing on LPs that have been unable to create or sustain a viable STC program.
2. Given the diversity of STC implementation strategies used by the LPs, the Case Study design would have to provide flexibility in data collection. Moreover, since LP strategies aim for impact at multiple levels (student, teacher, employer, local system, and state system), evaluations would have to be conducted at various levels.
3. Attitudinal measures must be examined in conjunction with student performance indicators since many STC activities aim to change students' attitudes as well as skills and knowledge.
4. Existing data on STC offer little to no comparability. Therefore, standardized, well-defined indicators, data-collection instruments, and methods linked to these indicators must be developed.

Based on these factors and WestEd/MPR's goal of acquiring detailed information on LP strategies for implementing and sustaining STC activities across the state, the following Case Studies approach was developed.

CORE and PLUS Evaluation Activities

Case Study activities are divided into two sets: CORE and PLUS. Applicant LPs had the option of applying for CORE funds only or for both CORE and PLUS funding. CORE activities are central to the Case Studies. They build on existing STC evaluation resources (e.g., the Progress Measures and Local Partnership Surveys) as a basis for describing STC implementation and assessing the potential for sustaining these education reforms.

CORE evaluation efforts focus primarily on activities and people associated with high schools (students, teachers, employers, labor organizations, etc.), but also address K-8

schools and community colleges to a lesser extent. This high school focus is consistent with the evaluation's desire to identify arenas where STC activities are delivered to large numbers of students with relatively high implementation. High schools are generally the most likely place to find large numbers of students receiving multiple STC experiences of longer duration.

PLUS evaluation activities focus specifically on the question: *How has STC participation affected student preparation for postsecondary education and career entry?* Interested LPs could design their own specific PLUS research questions and evaluation activities as long as their PLUS activities (1) focus exclusively on the relationship between STC implementation and student performance measures, and (2) use quantitative analyses to answer the targeted research question.

To conduct CORE and PLUS evaluation activities, LPs were required to secure the services of a qualified evaluator or to demonstrate that existing internal evaluation resources would meet the demand of completing the workplan (see Appendix H: CORE Case Study Workplan). Evaluators play a crucial role in Case Study data collection and analysis. Therefore, LPs were expected to sufficiently demonstrate that evaluators' experience and expertise would enable them to meet the challenges of the rigorous workplan. The qualifications of evaluators were heavily weighted during the proposal scoring process.

Training the LP Directors and Evaluators

Because CORE Case Studies aim to gather and analyze comparable data from a diverse set of LPs, CORE activities are highly prescribed. All LPs awarded CORE funding must use the data-gathering instrumentation provided by WestEd/MPR over specified periods of time and present analyses in formats prescribed by WestEd/MPR. The use of common instrumentation and formats for analyses is designed to ensure standardization across cases and make the evaluation process easier and more efficient for LPs.

Given the importance of standardization across all CORE Case Studies, WestEd/MPR staff held a two-day training for LP Directors and Evaluators on February 13-14, 2001 to discuss required protocols, reporting formats, and other issues associated with the Case Studies. This training was designed to be the primary means of providing technical assistance to the LPs.

A total of 45 individuals attended the training, including representatives from each of the Case Study LPs, state-level employees, and project staff. The training agenda included an overview of the key elements of the Case Study design, a discussion of contractual issues and requirements, sampling issues, and quarterly and final reports. The project statistician provided instruction on calculating analysis weights, selecting samples, and determining and maximizing response rates for the Senior Survey. Other topics of discussion included interview protocols, school site visits, the Local Partnership Administrator Survey, and the timeline for completion of Case Study data collection and analysis. (See Appendix I: Training Day Agenda and Materials.)

Although the primary focus of the two-day training was on CORE evaluation activities, LP Directors and evaluators had opportunities throughout the training to ask questions related to PLUS evaluations. Moreover, an optional question-and-answer session was held for PLUS evaluators at the end of Day 2 of the training for those needing additional technical assistance.

Developing LP Data Collection Instruments and Analysis Protocols

All CORE data collection instruments for Case Studies were developed by WestEd/MPR, with input from the Practitioners Panel, and were designed to provide LP evaluators with both quantitative and qualitative data that address the evaluation's four main research questions.

CORE Case Study research entails administering the following instruments (See Appendix J: Examples of all Available Instruments):

- Administrator Surveys (Fall 2001). These surveys will be given to principals of all public K-12 schools. Since elementary, middle, and high schools typically have different approaches to STC implementation, slightly different versions of the survey have been developed for each of these levels. Topics include: partnership composition and governance, career awareness and development activities offered by partnership schools, career-related programs of study, work-based learning strategies, secondary-postsecondary linkages, standards and certification, professional development, and strategies for the future. CORE evaluators are expected to achieve a 70% response rate on these surveys. Evaluators will report data to WestEd/MPR that are aggregated across all schools completing the survey.

- Senior Survey. In April 2001, CORE evaluators from each funded LP will administer a two-page Scantron survey, developed by WestEd/MPR, to a stratified, random sample of 150 seniors from the class of 2001 from each high school in the CORE intensive sample. Topics on this survey include students' participation in various STC activities, their attitudes about STC, and their career and educational plans after graduation. In addition, the survey includes demographic items such as students' ethnicity and their parents' educational levels. Evaluators are expected to achieve an 80% response rate at each school. Data from each of the school sites will be aggregated across each LP. To ensure that each LP reports comparable data to WestEd/MPR from this survey, project staff provided LPs with "data shells" that clearly specify how data must be analyzed.

- Senior Follow-Up Survey. In Fall 2001, respondents who completed the first senior survey will be asked to complete a second survey. Evaluators will be expected to achieve a 75% response rate on this instrument. Because WestEd/MPR wants the design of the survey to be informed by the results of the first survey, this instrument has not yet been developed. Overall, the purpose of this instrument is to determine if the initial plans seniors described in the first survey were realized. This follow-up component is generally not conducted because of the logistical difficulties of locating students after graduation. However, data from this survey will allow WestEd/MPR to ascertain if graduates are taking the first steps in meeting their educational and career goals. As was the case with the first senior survey, LPs will be provided with detailed data shells to ensure comparable data analysis across LPs.

- School Site Interviews (Spring-Fall 2001). At each high school identified as a CORE intensive site, evaluators will conduct a series of interviews and/or focus groups of counselors, principals, other administrators (e.g., STC Coordinator), teachers, and key school site staff. The purpose of these interviews is to get a comprehensive picture of the implementation of STC from data aggregated across each of the CORE intensive schools. Although LPs are not required to submit school-level data to WestEd/MPR, project staff created a school-level reporting format that will enable evaluators to provide each high school with data about the status of STC at their site, using information from the school site interviews, both senior surveys, and the administrator survey.

- LP Director Interview (Summer 2001). Each evaluator will conduct an extensive interview with the LP director, covering topics such as LP composition and

governance; LP relationships with employers, community-based organizations, labor organizations, and other stakeholders; the influence of STC on academic standards, career awareness and development, curricula, and assessment; and efforts to sustain and expand STC efforts.

- Employer/Labor Organization Interviews (Summer 2001). From each high school in the LP's CORE intensive sample, evaluators will be asked to identify and interview at least five employers of students who participated in career majors or academies, as well as all labor organizations working with students who participated in pre-apprenticeships or apprenticeships. Topics covered on the interview protocol include: roles of the employer/labor organization in STC efforts, sustainability of STC, and the influence of STC on students' preparation for employment and transition to postsecondary education.

Strategies for Supporting and Monitoring the LP Case Studies

Prior to beginning the evaluation work, several LPs expressed questions and concerns regarding various aspects of the Case Study evaluation process. At the initial training, and in subsequent phone calls and email messages, LPs articulated a need for additional assistance in implementing various aspects of the evaluation, including administering the Senior Survey—a critical data gathering component. Initially, it was intended that WestEd/MPR would develop the evaluation instruments and guidelines for the Case Studies, provide training, monitor LP implementation progress, and synthesize information across the Case Studies. Moreover, WestEd/MPR agreed to be available for technical assistance when necessary. However, based on the questions expressed by the LPs, it became clear that ongoing guidance, interventions, and in-depth technical assistance would be required during the entire evaluation process. It also became apparent that, if LPs were to provide consistent and accurate data, WestEd/MPR's role would need to intensify considerably from primarily a monitoring entity to include that of a technical assistance provider. In response to LP requests, WestEd/MPR have created various materials and resources to guide LPs through the evaluation process. Materials include a vignette detailing school-level data analysis for a fictitious high school and prescriptive reporting formats. (See Appendix K: Vignette and Reporting Format.)

While LPs expressed the need for these frequent and informative communications, limited evaluation resources made it impossible to sustain such a level of intervention. Therefore, WestEd/MPR developed the STC Case Studies Forum, a Web-based means of

communicating with LPs, sharing resources, and providing technical assistance. Designed in collaboration with WestEd's Director of the Application Development Group, the Forum is email and Web-based, allowing project staff to make general announcements and providing LPs the opportunity to ask targeted questions regarding their evaluations. Unlike a Listserv, which is generally facilitated, the Forum is moderated by project staff, ensuring that LP questions are answered in an accurate and timely manner.[7] The Web-based feature allows participants to view questions and responses in their entirety. In addition, questions posed by LPs will provide WestEd/MPR staff insight on the progress of the evaluation to inform decisions and strategies for interventions as necessary.

The Forum also provides a means for disseminating instruments and materials during the various stages of the evaluation. All materials are posted in various formats which can be downloaded across platforms. The Forum is the primary means of providing LPs with technical assistance and will be adapted in response to the changing needs of the LPs.

Review of LP Quarterly Report and Draft Final Reports

To ensure that the various stages of the evaluation are progressing accordingly, LPs are required to submit detailed quarterly reports throughout the evaluation. This is a purposeful strategy for monitoring the progress of each LP and to ensure that project staff can provide additional guidance or interventions if and when necessary. Sequential quarterly report requirements include:

- Quantitative analyses of data gathered from the Senior Survey in April 2001. (Reporting formats are provided.)
- A final narrative description and analyses of data gathered from the Survey administered to high school seniors in April 2001, as well as analyses and narrative description of data gathered from interviews with employers, labor organizations and LP directors. (Reporting formats are provided.)
- Quantitative analyses and narrative of data gathered from Senior Follow-up Survey; data from all interviews; and quantitative analysis and narrative of data

[7] In this instance, "facilitated" refers to a passive, "hands-off" approach to technically managing an on-line discussion. "Moderated" refers to a more active role where the moderator has a much greater level of responsibility for maintaining the integrity and content of the on-line discussion.

for Administrator Surveys of all K-12 public schools conducted in September-October 2001. (Reporting format will be provided.)

- Final synthesized analyses and narrative of all required data. (Report outline will be provided.)

Timeline for Phase 2 Evaluation Activities

As demonstrated by the information required in these periodic and prescribed reports, data requirements are distributed to allow for a logical sequence in data collection and build on prior work conducted. In addition, when developing the CORE timeline, project staff took into consideration schools' calendars in order to minimize the burden on schools and LPs.

IV. Phase 2 Methodology Issues Related to the Final Report

WestEd/MPR have brought together a diverse set of quantitative and qualitative approaches to answer the primary research questions in Phase 2. The specific approaches for Phase 2 activities were designed within the context of the state's interest in a comprehensive statewide evaluation of STC activities and the constraints of conducting analyses in a large state within a fairly short time period. The research design also takes into account the additional requirements imposed on the use of federal STW funds. Finally, the design is intended to be sufficiently flexible to accommodate any unanticipated challenges or changes associated with the complex STC landscape in California.

While the Phase 2 approaches and activities have been described at length in both the White Paper and in Section III of this document, we would like to emphasize key methodological issues that are likely to affect the final evaluation results. This section focuses on four methodological issues that are emerging as key to analysis and reporting of results for the final evaluation report. They include: maximizing and documenting response rates, applying common definitions to variables of interest, implications of sampling for aggregating results, and identifying the appropriate unit of analysis.

Maximizing and Documenting Response Rates

Surveys represent a major strategy for data collection across different components of this evaluation. WestEd/MPR project staff rely on surveys to collect information from employers and labor organizations. The Case Study LPs are using surveys to collect information from high school students (Senior Survey, Senior Follow-up Survey) and school administrators (Elementary, Middle, and High School Surveys). Although surveys constitute an efficient way to collect information on a large number of possible respondents, the usefulness of the resulting data depends on achieving an adequate response rate. Therefore, maximizing response rates is a critical concern of this study.

As previously described in Section II, the potential for an inadequate response rate led us to reconsider one of our Phase 2 activities: a mail survey to the directors of all LPs across the state. The original intent of the survey was to determine the status of STC penetration in California LPs, with particular emphasis on the question of STC sustainability. Instead of mail surveys, our revised plan is to conduct telephone interviews of LP directors. Although more time intensive, telephone interviews typically result in better response rates. Through this change in data collection strategy, we hope to achieve a higher response rate and, hence, a more complete picture from LP directors of STC sustainability.

Despite the proposed change in strategy for obtaining data from all LP directors, switching from surveys to interviews is not appropriate or feasible when hundreds or thousands of potential respondents are targeted. For example, such switches are not appropriate for the CORE LP Case Studies, as they were specifically designed to include a strategic balance of surveys and interviews. Even so, selected LPs have expressed concerns about achieving the high response rates for the student and administrator surveys called for in the RFP. In response to these concerns, a substantial amount of time was spent on possible strategies for increasing survey response rates during the initial February 2001 training of Case Study LPs. Since LPs continue to ask for technical assistance in this regard, LPs that are successful in obtaining a high response rate are encouraged to share their effective strategies on the email/Web-based Case Study Discussion Forum.

In summary, the issue of maximizing response rates is likely to be a concern throughout the study. However, both WestEd/MPR project staff and individual LPs are monitoring and documenting the response rates achieved for purposes of the final report.

Applying Common Definitions to Variables of Interest

Another notable White Paper finding is the lack of common STC definitions and concepts across the state, as evidenced by the different terminology and meanings described in individual LP STC implementation plans. Given this finding, project staff

investigated and provided common definitions of variables of interest for different Phase 2 data collection activities. For example, definitions for "high intensity" STC schools and students were provided to LPs conducting Case Studies. LPs were instructed to use the definition of "high intensity" (or "high STC implementation") schools to categorize all the schools in their LP (as "high intensity or "other"). MPR staff then used the categorized lists provided by LPs to draw stratified samples.

Our experience to date is that merely providing common definitions is not enough to ensure uniform application of these definitions to variables of interest. Specifically, many LPs that are conducting Case Studies continue to raise questions on a daily basis about the definitions we have provided for high intensity schools and students, and some want to tailor the common definitions or use their own. With the recent "roll out" of the Case Studies Senior Survey, we are also finding differences across schools in the use of STC-related terms such as "career academy" and "career pathway." As such, we have advised all LP evaluators to be cognizant of how the schools in their sample are using these terms so that the survey administrators can clarify any potential confusion about terminology for students before they complete the surveys. Local evaluators will be advised to make similar clarifications before administration of the administrator surveys.

In summary, the lack of consistency in how STC-related terms have been used across the state is a challenge that we are currently facing in our evaluation implementation. We have handled this issue proactively in the Case Studies by advising all LPs to use the common definitions of "high intensity" students and schools to re-examine their classifications. If LPs found some schools to be inadvertently misclassified, we instructed LPs to reclassify them for purposes of analysis. During our synthesis of findings across LPs, WestEd/MPR will also take into account any reclassification or differences in defining of variables of interest in reporting on STC trends and patterns.

Implications of Sampling for Analysis Across LPs

Well-conducted sample surveys allow us to estimate the incidence of STC participation and attitudes about further schooling and career opportunities in the larger population

from the sample of students, employers, and labor organizations contacted in Case Study research. Surveys provide uniform question wording, known probabilities of selection, and the ability to generalize within well-defined limits.[8] Probability sampling allows us to aggregate the information across selected schools to provide partnership-wide estimates for all high school seniors in an LP. It also allows us to estimate how much variability there is in our LP-wide estimates due to sampling, and thus the size of "confidence" intervals around estimated means and proportions.

Although the sampling methods used to conduct the Senior Survey are based on probability sampling, LP results cannot be combined together to provide statewide estimates for all high school seniors. Although we can aggregate across high schools within an LP to provide an LP-wide estimate, we cannot do the same across LPs.[9]

All the reasons cited in the footnote below for not aggregating data across LPs apply not only to the Senior Survey, but to all other data collection methods used in the Case Studies. Therefore, the final report will provide major findings broken out by each LP, will describe trends and patterns across LPs, but will not combine data to provide "statewide" estimates. Since part of the LP selection included a desire to reflect factors such as geographic (North and South) diversity, urbanicity, and student diversity, we believe the results will provide a comprehensive picture of STC activity as it occurs across the state.

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[8] In the CORE Case Studies, for example, the Senior Survey is based on a stratified random sample of all high schools served by a LP. Schools were selected according to strict sampling procedures, with each school having a known probability of selection. Students within schools were also selected using a stratified random sample based on the intensity of their exposure to STC activities.

[9] The reasons for this are reasonably straightforward. First, not all STC LPs participated in the case studies. Of the 61 LPs invited to submit a proposal, only 15 submitted responses to the Case Study RFP. This introduces a "selection" effect, meaning that there is likely to be something different about those LPs that wrote proposals compared with those that did not, and this difference is likely associated with important aspects of the study. Second, not all the LPs that submitted proposals were funded, thus introducing another selection element. Third, although all the CORE studies follow a uniform approach to sampling and student selection, the actual implementation varies from school to school within LPs because the schools themselves vary in idiosyncratic ways. Within LPs, we expect local evaluators will design a consistent approach to handling the differing situations they find. Their decisions about how to deal with local conditions are not necessarily the same as the decisions that another local evaluator in a different LP would make. Thus, variations among evaluators introduce another uncontrolled element that argues against combining results.

Identifying the Appropriate Unit of Analysis and Reporting

Because this statewide evaluation encompasses disparate LP Case Study evaluation efforts that must be compiled and synthesized, it is important to make explicit for each component of the study the appropriate unit of analysis[10] and reporting. For example, the analysis protocols for the CORE studies have been designed to identify the appropriate unit of analysis, thereby helping to ensure comparability of analyses and reporting across LPs. Furthermore, the protocols are intended to encourage local evaluators to synthesize the different views of STC that the quantitative studies (e.g., the Senior Survey and the Senior Follow-up Survey) and the qualitative studies (such as interviews with teachers, school administrators, local employers, and LP directors) provide. (As previously noted, the specific partnership-level reporting requirements are attached as Appendix K.)

In order to provide a comprehensive and meaningful picture of STC, the appropriate unit of analysis for each Case Study is at the partnership level. Indeed, the LP is the appropriate focus for this study because this is the level at which funding and major decision-making regarding STC occurs. Moreover, with over 120 schools across the Case Studies, it is beyond the scope and resources of this statewide evaluation to analyze and report results for individual schools.

Although the individual school is not the targeted unit of analysis for the Case Studies, participating schools are asked to provide a wealth of data. These schools are motivated to participate in the statewide evaluation, in large part, by interest in their own school-level data that is generated from this study. Indeed, many local LP evaluators have agreed to provide schools with this data. Therefore, project staff have provided a school-level reporting format to local evaluators as part of overall technical assistance. Local evaluators can use this format to focus their school-level analyses and reports in a form that is both useful for their own analysis needs as well as for providing data to schools.

[10] A unit of analysis is the persons or things being studied, and can be individuals, groups, organizations, etc. Choosing the appropriate unit of analysis is important since this decision has implications for how data can be generalized.

V. Structure of The Final Evaluation Report

Our analysis of the progress to date on the statewide evaluation study has helped shape our thinking about how to organize the final evaluation report. Moreover, the proposed organization for the final evaluation report is based on key assumptions about how to maximize the usefulness of the report. Specifically, we assumed that the final evaluation report must:

1. provide clear and direct answers to the research questions of interest about the status of STC implementation in California, how STC affects student preparation for the future, how STC contributes to systemic change, and the sustainability of STC;
2. fill the existing data gaps in our knowledge about STC by including comprehensive and comparable data from sites across California;
3. provide meaningful data syntheses, interpretation, and recommendations to help inform next steps and policies concerning STC in California; and
4. be designed to accommodate widespread dissemination and use by different constituents.

With these criteria in mind, we propose to organize the final evaluation report into six main sections, followed by appendices. The report will also include a non-technical executive summary that will be suitable for wide dissemination. Each main section of the report is described below.

Section I: Introduction

This section will introduce the study, its purpose, and the historical and socio-political context in which it was designed and implemented. The introduction will also present the research questions of interest and lay the groundwork for the rest of the report.

Section II: Methodology

In this section, the overall evaluation design and methodologies will be described. It will also present the rationale for the various methodologies, how they supplement and complement each other, as well as how they address the research questions of interest.

Section III: Results of Statewide Evaluation Components

This will be the first of three sections on evaluation results. This section will present the findings for the statewide evaluation components (i.e., non-Case Study components), including: the telephone interviews of the LP directors, the Employer/Labor Organization Survey 2, and the syntheses of data from extant sources (e.g., National School-to-Work Surveys, LP quarterly reports, other evaluation reports).

Section IV: Cross-LP Analyses of CORE Case Studies

This section will present the trends and patterns that are discerned from the cross-LP analyses and syntheses of CORE Case Studies. To facilitate greater understanding and usability of these results by LPs and other interested audiences, this section will present findings in a similar format to the one we designed for individual LPs to use in reporting Case Study partnership level data. Specifically, we will present findings in the following major categories:

- Partnership composition, funding, and roles and responsibilities
- Career awareness, exploration, and development activities
- Career academies and career majors/pathways
- Curriculum integration strategies
- Work-based learning
- Principals, teachers, and professional development
- New standards and certification
- Connections with business, labor organizations, and postsecondary institutions
- Connections between STC participation and outcomes for students involved in STC
- Sustainability of STC efforts

Section V: Cross-LP Analyses of PLUS Case Studies

Whereas the previous section presents cross-LP findings of CORE Case Studies, this section will focus on the findings of PLUS Case Studies. As such, it will highlight trends and patterns across LPs concerning the relationship between student performance/achievement and STC participation (as measured by test scores, grade point averages, etc.).

Section VI: Conclusions and Recommendations Regarding STC in California

Based on results across all components of the statewide evaluation, this section will draw conclusions regarding STC in California and make specific policy recommendations. We will also distill the important "lessons learned" about STC. The conclusions and recommendations will be organized around the four research questions of interest: status of STC implementation; STC effects on student preparation for the future; STC contribution to systemic change; and sustainability of STC.

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